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AUTHOR Braden, Roberts A.
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ABSTRACT

This chapter examines the relationship between education, educational technology, and instructional development. The Universe of Learning model and the China Syndrome (i.e., the tendency to see oneself, one's activities, or one's interests as being at the center of things) are discussed in relation to student development, faculty development, organizational development, developer development, and context development. These forms of development are also considered in relation to each other, to the cybernetic model, and to education. It is argued that education is not centered around instructional development, as some in the field seem to think, but around student learning, with instructional development as one important component. Seven figures are provided. (20 references) (Author/EW)

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# Chapter 4

# A Place in Space: ID's Universe

Roberts A. Braden

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TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

**Instructional development is the central concern of this book. It is the center of focus of most of our jobs. It forms the center of conversation when we meet. But instructional development is only one part of educational technology; and educational technology is only one part of education--an invisible part, in the view of many educators.**

**This chapter examines the implications of this situation, and, hopefully, will restore a balance to the thinking of those of us who, in our own view, have become stars in the ID Universe.**

The sun revolves around the world (which is flat). I know that it is flat because I observe the sun as it rises each morning, as it moves in a sweeping arc across the sky and as it sinks beneath the edge of the world each evening. "Seeing is believing," says the old cliche, and I have seen it. Absurd? Yes, seeing is worth believing only when your assumptions are believable. So let us begin again.

Who knows what revolves around what? Well, in the astronomy of education there is a great universe known as DET (an acronym for Domain of Educational Technology). At the very heart of the DET universe is the most sparkling of all of the galaxies, DIT (another acronym, this time standing for Domain of Instructional Technology). Yes, and if you believe in this brand of astronomy, within DIT there is a solar system of functions known as ID (most readers will recognize this as the acronym for Instructional Development).

If all of this is beginning to suggest to you that a fantasy is being described, please continue and reserve your judgment. At this point do not be overly concerned that Id is a cartoon nation with a wizard and a little king and that id in Freudian psychology is the primitive psychic apparatus from which come the ego and superego. ID (all caps) has its wizards, its leaders (though none are kings), its egos and even its superegos. It also has its place in space, but whether that place is at the epi-center of education is a matter that bears closer examination. And that, dear reader, is what this chapter is all about.

Most educational technologists today would concede that instructional development (ID) is a term that represents a process highly steeped in theory. the process assumes ideals and fosters logic. Instructional development is also a profession that performs identified functions within the domain of instructional technology. In the educational technology community there is very little uncertainty about the general nature of ID. There is a high degree of agreement about the concepts that are central to the identification of the profession, the description of the process, and the definition of the term. There is much disagreement about the periphery. The edges of the ID concept are fuzzy. That is, there is no consensus--and there may never be--concerning the limits of the process or the boundaries of the profession.

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These uncertainties couse us periodically to reconsider where ID "fits" into the overall scheme of things. Such a reconsideration will be presented here.

## THE CHINA SYNDROME

The name "China" is a somewhat distorted transliteration of the Chinese characters jung (pronounced almost "jeeng" in the Cantonese dialect and gwa. Jung means center. Gwa means country. Together jung-gwa (jeeng-gwuh--soon distorted to cheen-uh) is the name the Chinese gave to their own country. The Chinese ideogram for jung started out as a graphic representation of the world with a line through its center--all of which makes sense because the mandarin mentality held that China was the center of the world. Modern Chinese tend to think so, too.

A tendency to think of oneself, one's activities, or one's interests as being at the center of things is the Real China Syndrome-(X). Of course, self-centeredness is not restricted to the Chinese. It is pervasive in the field of education, where Syndrome-(X) may explain the proliferation of such terms as teacher-centered, program-centered, and student-centered.

Self-centeredness is also well known in systems-approach circles. Systems people who, in the words of Ivor Davies, "are in love with boxes and arrows," are also likely to be infected with Syndrome-(X). A symptom of the combined afflictions of box-and-arrowitis complicated by Syndrome-(X) is an uncontrollable urge to design relationship diagrams which create the illusion of centrism. Syndrome-(X) sufferers always put their own "thing" in the center--where else? (From an existentialist view, the center would therefore be expressed as "my thing" or "our thing.") The resultant view of the big picture thus resembles Figure 4-1. (Substitute appropriate labels from the professional jargon, please.)

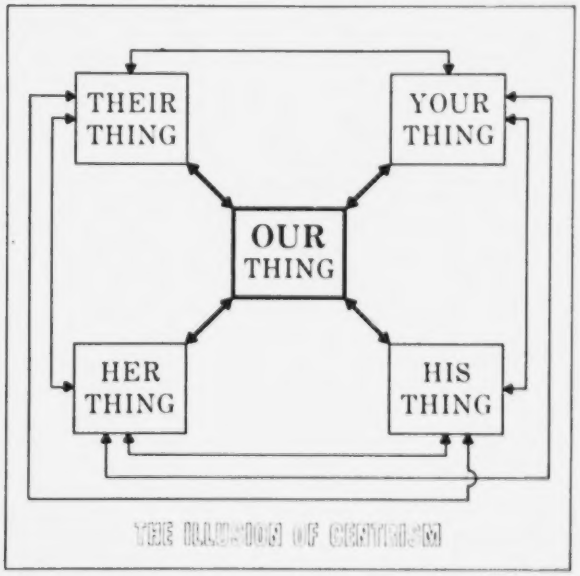


**Figure 4-1. A self-centered systems model, with boxes and arrows.**

Syndrome-(X) explains in a somewhat frivolous way why faculty developers tend to place faculty development in the middle of things; instructional developers like to put instructional development at the heart of things; organizational developers...well, you get the idea. Individuals who have even moderate spatial-relation skills will recognize that any box in figure 1 could be manipulated into the center without changing the relationships.

Models which focus upon anybody's thing are useful. The inherent weakness of models of this sort is that the outer lines and arrows tend to get lost. Thus, over time, the illusion of centrism can cause people to lose sight of the functions of some of the components of the real system. More about that later...

Whereas the Chinese consider themselves to be at the center of the universe, for many years the United States government took the official position that China did not exist at all. We Americans did not "recognize" China. Diplomatically we defined a world which ignored a big chunk of real estate and a billion people, give or take a few. We were neither fantasizing nor doing something wildly unusual. We do the same sort of thing all the time within the academic sector by defining the world in ways which serve our own purposes. The practice has been called operationally defining, delimiting, and fancier things like "setting the background" or "establishing the context." I would prefer to give another name to the practice of defining and describing any incomplete reality: Real China Syndrome-(Y). The name is not entirely whimsical. The China example is a good one and the phenomenon recurs often enough to be called a syndrome.

The important thing that Syndrome-(X) and Syndrome-(Y) have in common is that both syndromes encourage thinking about partial realities as opposed to total reality. The syndromes are the product of procedures that serve usefully as aids in considering several variables. However, it is not the utility of the syndromes that concerns me as I contemplate the place-in-space of ID. Rather, it is the mischief that could and does occur when we mislead ourselves or fail to consider something because it was arbitrarily left out. Syndrome-(X) hovers as a threat that we might design a model that slights the most important function of the educational system by placing it too far towards the periphery. Syndrome-(Y) with its temptations is a reminder that nothing can safely be left out because education does not operate in isolation, nor do the functions within education exist in isolation. When we consider ID in the light of Syndrome-(X) we discover that not only is ID not at

the center of the universe in which it resides, it is not even immediately adjacent to the center. When ID and Syndrome-(Y) are considered, we find that there are many components of the system which interact with ID, and should be considered.

## THE UNIVERSE OF LEARNING MODEL

The Universe of Learning Model, as its name implies, is predicated upon the realization that student learning is at the center of the educational universe. Having learning at the center of focus is not so much a novel idea as the restoration of a good idea to a place of prominence in our thinking. With student learning at the center of the universe of concern, a model has been constructed which portrays the relationships of the several components of that universe. Figure 4-2 is the first phase of that model.

At this point an important distinction should be made. The Universe of Learning Model is neither student-centered nor teacher-centered--it is learning-centered. To be sure, learning is done by the learner and in that respect the model is more student-centered that teacher-centered. The fact that the model does not concern itself totally with students as individuals is not intended to be an affront to humanistic concerns or to diminish the primacy of the student in the total process. Rather, the model is intended to be a graphic representation of relationships.

More than any other variable, student attributes influence learning. Therefore student development has been given a place in the model with a direct connection to student learning.

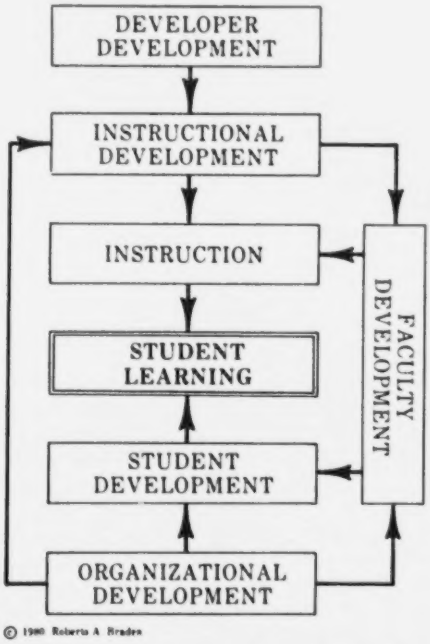


**Figure 4-2. The universe of learning model: I.**

## STUDENT DEVELOPMENT

The term student development (SD) as used here is given broad meaning. The attitudes, the skills, the aptitudes of the learner all contribute to the successful learning experience. The term itself is a recent addition to the instructional developer's lexicon. Hand (1978, 1979) and Bass (1979) introduced SD as a logical conceptual addendum to the instructional development/faculty development/organizational development categorization scheme.

Generally speaking, the SD concept relates to any of a large number of activities, events, strategies, processes, or whatever, that will bring about a change in the skills or attitudes of the learner or will enable a more efficient application of a learner's aptitudes so as to increase learning. If you like the mechanical metaphor, SD can be stated more simply; it is anything which provides the student with additional learning tools. As a primitive concept, SD is an area about which we know too little and about which we may never know enough. Our educational system is unlikely any time soon to change from an emphasis upon the teaching of content to one of fostering what Hand (1979) would call the "development of the student's learning capabilities (both skills and attitudes) to the maximum potential." Even if there were a mandate for such a change, it could not be accomplished easily. There are no widely accepted procedures for helping people to learn how to learn. That should not be accepted as an ongoing excuse, however, for indefinitely ignoring the potential of SD. Recent research concerning the training of students in the use of appropriate learning strategies has provided results which Snowman (1979) believes warrant the inclusion of learning-strategy courses in school curricula.

## INSTRUCTION

Another major variable affecting learning is instruction. The term instruction, too, is given wide meaning as applied to this model. It includes all of the hyphenated and adjectively-modified variations of the term, such as self-instruction and programmed instruction.

The concept of instruction can be operationally defined as a limited procedure by fettering it in caveats, but in the system of relationships shown in Figure 4-2 this function, as depicted, is unfettered. In this sense instruction can be accidental or planned, wandering or purposeful, personal or impersonal, managed or uncontrolled, traditional or innovative, and so forth. The exact procedures involved in instruction are not at issue here--it is the relationship of instruction to the other functions in the universe of student learning that is central to this discussion. As a matter of passing interest, however, in the model shown, the

expectation would be for a purposeful, systematic, efficient, appropriate, giving of knowledge by one person to another via a suitable medium of communication.

The student takes the instruction. then, through some internal process which can be enhanced by SD, learning occurs. When the concept of instruction is linked to predetermined purposes, that is, when instruction becomes intentional (as it usually does), then the role of faculty as managers of instruction can be related to the role of instructional developers as facilitators of managed instruction. With that introduction, we arrive at "the place in space" of ID.

## INSTRUCTIONAL DEVELOPMENT

In this volume, at least, it is unnecessary to define or describe ID. The hoped-for result of ID is effective and appropriate instruction. Neither the recipients of the instruction (students) nor the presenters of the instruction (usually faculty) may care a great deal about learning theory, cost effectiveness, the mechanics of individualizing according to aptitude, achievement, or style, and/or a host of other considerations that go into the design of effective and appropriate instruction. That is why ID has a place in this model. ID directly influences the quality of instruction by being that functional part of the system which is concerned with all of the things that go into instruction.

ID also indirectly influences instruction by contributing to faculty development (FD). Some FD programs literally consist of instructional activities for faculty. In the best of all worlds, instruction-for-faculty would receive the same scrutiny from instructional dvelopers as would any other instruction. In a less obvious way, ID contributes to FD any time a faculty ID client gains a better appreciation of quality instruction and a growth in personal instructional skills while participating as a content expert in an ID project.

There is no line and arrow in Figure 4-2 from ID to SD. Theoretically there could be. For example, learning skills must themselves be learned, and the instruction required to bring about that brand of SD could be developed through an ID product. Going in the other direction, student learning could be fostered by involving selected students in the ID process, developing instruction for their peers. At this time, however, neither of these ID-to-SD scenarios is likely to be realized.

## DEVELOPER DEVELOPMENT

The ways in which an instructional developer influences instruction are inextricably linked to the personal makeup of the developer. That includes the way in which s/he was prepared for the profession and her/his professional and personal growth since that time. The makeup of the developer also includes aptitudes, attitudes, and attributes which are beyond the scope of the goals pursued by programs for professional preparation and development. Mostly these are characteristics which were developed prior to entry into professional preparation and thus need not be discussed here; their effects upon professional performance, and so ultimately upon student learning, however, should not be ignored.

Whereas Faculty Development (FD) is concerned primarily with those things which affect the faculty member after her/his entry into professional service, Developer Development (DD) includes a concern for all that occurs during the period of professional preparation as well. This concern has recently been reflected in the efforts to bring about certification. The much-touted benefits of certification will not come easily to the field of ID because the only thing standard about ID training programs is that they are all nonstandard. There is no definitive textbook for use in teaching ID at any level, although the report of Miller and Naumer (1979) identified a host of different materials (135 items) being used around the country. That is the bad news.

The good news is that the ID literature as a whole is rich. The preliminary report by Rossett and Nimis (1980) of their interviews with professional instructional developers revealed that "there was not a single indictment of our professional literature." Rossett and Nimis also reported that there are four prevailing options to follow in the training of instructional developers: "university programs, field experiences, print materials, and contacts with colleagues and friends." There may not be enough standardization to allay all the fears aroused by the prospect of certification, but DD is alive and well. Thanks to the work of individuals like Rossett and Nimis our conceptions about the origins of instructional developers are changing. DD is no longer viewed as unidimensional or single-faceted. The DD system seems to be providing the opportunity for both preprofessional experience and for ongoing professional development. Articles and chapters have been written and papers presented on the substance and methods of teaching ID, as for example those of Patridge and Tennyson (1979), Colton (1978), and Braden (1977).

Of even greater significance may be the trend towards an increased flow of manuscripts and presentations on how the developer performs her/his role in the helping relationship. The advent of a special issue of the Journal of Instructional Development devoted to consultation, headed by Barry Bratton's powerhouse article, "The Instructioinal Development Specialist as Consultant," (Bratton, 1979) is a milestone in the maturation of a DD system that provides competent professionals whose ability to perform the ID function is constantly improving.

As shown in Figure 4-2, the functions of preparing instructional developers and of providing for their ongoing professional growth, collectively called developer development (DD) are not the same as the ID functions themselves. Because DD requires prospective and practicing instructional

developers to learn and to continue to learn, it would be nice to think that the best "developed" instruction in the university curriculum is that used to prepare instructional developers. Unfortunately, this appears not to be the case.

No single institution is likely to initiate its own full-service DD program. The concept and the term DD are introduced into this model because, with theoretical expansion and detailed explication, the idea might be useful as the basis for a profession-wide program. for example, a three-faceted DD paradigm would accommodate (1) the methods of DD that Rossett and Nimis have identified, (2) the recipient populations of DD (professionals, faculty, and students) and (3) differentiated levels of DD including at least a distinction between the theory-strategy and the technical levels. A sound certification program would benefit from such a paradigm as part of its bedrock.

## FACULTY DEVELOPMENT

The relationship of faculty to instruction is clear. Faculty provide instruction. That is not news. Faculty have been providing instruction for a long, long time. Today, however, there are many more options and variations open to faculty pertaining to the methods by which instruction may be provided than there were in the past. To take full advantage of these options many changes would have to be made. Some of the changes might have to occur to the faculty persons themselves. Without doubt, any changes in faculty members will in some way be reflected in the instruction they provide. When we talk about "changing" faculty members we are talking about faculty development (FD).

There is no general agreement as to what constitutes FD. The definition in the AECT glossary is so pejorative that is isn't very useful. The definition by Francis (1975) is better:

> Faculty development is an institutional process which seeks to modify attitudes, skills, and behavior of faculty members toward greater competence and effectiveness in meeting student needs, their own needs, and the needs of the institution.

There is a tendency by some writers to think that FD is the whole "ball of wax" as far as instructional improvement goes. Rose, et al., (1977) commented upon the use of FD as an umbrella term. "As variously described in the books and articles cited..., faculty development includes instructional development, organizational development, and personal development." Braden and Terrell (1978) took issue with those who might equate ID and FD. The reasoning, which clearly stated that "Instructional Development and Faculty Development are not the same things," should have been extended to clarify that ID is not a subset of FD--the opinions of FD writers to the contrary notwithstanding!

The matter seems so simple that it is almost embarrassing to explain it, but perhaps it needs doing. Point: ID leads to changes in instruction. Point: FD leads to changes in faculty members. Point: ID and FD may take place concurrently, but they may also be completely separate. Point: An ID program may assume FD responsibilities and vice versa. Conclusion: ID and FD are functionally different but mutually supporting and neither inherently includes the other!

Some of the confusion of purpose surrounding ID and FD is reflected in the observation by Gow (1980) "Universities are interested in imparting design skills to their faculties as part of burgeoning faculty development programs." That doesn't make ID a part of FD. Consider this parallel example: some FD programs have mini-courses to help faculty members learn to use computers. Nobody is claiming that computer science is part of FD. We should not confuse the things that faculty learn in FD with the FD function.

Returning our attention to Figure 4-2, the importance of FD should not be minimized. Next to the students themselves, faculty are the most important actors in the learning drama. Faculty members whose "development" enables them to be more effective as they provide instruction will unquestionably have a greater positive impact upon student learning than will those who lack such "development". Also, faculty members whose "development" enables them to help their students become more efficient learners will be contributing immeasurably to student learning. In this latter role as facilitators of SD the faculty member may be a contributor to an institutionally-sponsored SD program or s/he may be an independent SD agent.

## ORGANIZATIONAL DEVELOPMENT

Organizational Development (OD), like the other "developments" discussed in this chapter, lacks neatness. The process, which varies from case to case, is, therefore, procedurally untidy. In an academic world where random growth and change are more the rule than the exception, OD proponents can be overwhelmed by a system that breeds chaos and tends toward anarchy. In such an environment, we should rejoice that, unlike ID, which gets operationally redefined with almost every second scholarly article, OD has been left virtually undefined--at least as OD applies in the Domain of Educational Technology. The one notable exception is the definition generated by the AECT Definition and Terminology Committee (AECT, 1979).

> **Organizational development.** A long range organization-wide, organization-sponsored effort to plan and implement controlled

> change in the organization through the use of applied behavioral science techniques; organization development differs from more traditional planning in that its intent is to change the beliefs, attitudes, and values of the organization and, in some cases, the decision-making process. Organization development views the organization as both a social entity with extensive human interaction as well as a system with its own purposes. OD makes use of people who act as "change agents" or "catalysts."

Somewhere in the educational literature there may be several operational definitions of OD which this author has overlooked. That is not the point. Rather, it is significant to note that educational technologists who have written about OD have either taken definitions from the business sector or have accepted the term "organizational development" as self-defining. The result has been a linking of personal interests, and thus a sharpening of emphasis, by various authors unrestricted by any broad but immutable definition. The license offered has produced interesting perspectives.

Berquist and Phillips (1977) consider organizational factors that affect motivation. As such, they portray OD as an area of activity which concerns itself mainly with the conditions of work. Specific concerns are for such things as group dynamics, the interface of the people dimension with the imperatives of the organization, and the structures and processes of the institution as these factors are linked to the motives of the faculty.

Abedor and Sachs (1978) limit their emphasis to organizational readiness (for change). They have suggested that there is a symbiotic, spiral relationship between ID, OD, and FD. In postulating this relationship Abedor and Sachs identify OD as an influential force in bringing about organizational readiness and relate this idea to five specific characteristics which influence organizational decision-making: structure, policies, rewards, norms, and resources. Without going into detail, Abedor and Sachs have noted that in instances in which a selected innovation requires a level of readiness that exceeds the existing level, "OD activities may be conducted concurrently with ID activities to ensure acceptance of the innovation." The clear implication here is that whoever is making ID decisions in these cases must also be able to shape or influence the structure, policies, etc., of the organization.

Gaff (1975) conceived OD as being of such broad character that its principles could be applied to any kind of organization--educational or otherwise. However, when he identified OD as one of the three rubrics that he would use to categorize the widely-held alternative conceptions of instructional improvement, Gaff limited OD directly to education. Two of the four purposes that he listed for OD were to "Create (an) effective environment for teaching and learning;" and to "Create policies that support effective teaching and learning." In his book, Toward Faculty Renewal, Gaff also discusses the basic assumptions and propositions of OD. The last topic on that list introduces the concept of planned change as an aspect of OD:

> Most organizations can be improved by a periodic review of their functioning and by initiating a process of planned change. The several steps in such change include diagnosing a problem, devising a plan that will solve the problem, implementing the plan, evaluating the effectiveness of the effort, and revising the plan in light of the evaluation.

The literature associated with organizational development indicates that organizational development can have several definitions. Of the three definitions that this author offers below, the first is the most passive, the second is the most descriptive of the symbiotic relationship with ID, and the last is the most pragmatic.

> **Organizational Development (OD):** (1) The changes in an organization as brought about by both internal and external forces. (2) A program* intended to foster goal-oriented, systematic changes in an organization. (3) A set of processes and procedures that form the modus operandi for operating an organizational development program.*
>
> (*NOTE: The term "program" implies an on-going effort. For one-time activities the term "project" could be substituted.)

A word of caution: we must not imagine that the tail wags the dog. OD is not a subset of ID. Policies flow downward in organizational hierarchies. In contrast, an idea for a policy change may originate at a lower level.

Similarly, the impetus for change may emanate from a mid-level or low-level change-agency within an institution. These are examples of upward influences. They have popular appeal. Still, in practice it may not be so. Policy changes tend to come from policy makers. Policy makers cluster at the top. Therefore, Figure 4-2 shows OD "input" into ID, FD, and SD with arrows that flow one way only. But in some organizations (and ideally) the system of governance is such that the OD-to-ID and the OD-to-FD arrows should show reciprocal input/output.

The point about the direction of the arrows should not be taken as trivial. Sad fact: The diagram in Figure 4-2 does not provide an accurate picture of the existing system at very many schools or colleges today. Thus far, only a few of our educational institutions in the course of their organizational development have made an organizational commitment to ID and FD. Even fewer institutions have made organizational provision for SD.

The literature on OD is growing rapidly. An annotated bibliography of 124 items has been prepared by Rose, Nyre, and Marantz (1977). The scope of the literature is broad, but its aggregate emphasis on human interaction, satisfaction, and effectiveness reflects a continued bias toward the parent literature from the business sector. There seems to be no doubt that in time OD will be strengthened as an area of concern in education. As Rose et al., (1977) have commented, "Organizational development affects the entire institution, as change in one area necessarily precipitates change in other related areas." The Universe of Learning Model shows the areas which are related to student learning so as to emphasize that the vitality of the OD effort (including receptivity toward change) is of primary importance to the evolution of healthy ID, FD, and SD programs.

Organizations do not exist in limbo. For that reason OD can be seen not only as an area of concern for inner change, but also as a conduit to the outer world, the context within which the organization exists.

## CONTEXT DEVELOPMENT

It has been more than a decade since the concept of context evaluation was first introduced (Stufflebeam, 1968). The importance of this contribution to the expansion of applied systems theory should not be underestimated. In a sense, an entirely new dimension was added. Let me illustrate this using the most basic cybernetic (systems) model.

In Figure 4-3 each of the three boxes provides an obvious place to superimpose one of the four elements of Stufflebeam's CIPP model. According to Stufflebeam's (1971) own definition, CIPP is "An acronym formed from the first letters of the four basic kinds of evaluation: context, input, process, product." Notice how neatly input evaluation coincides with input itself in the first box, how process evaluation overlays the second box labeled 'process,' and how product evaluation logically would be applied to the output box. That leaves only context evaluation to be located in the cybernetic model. Referring again to Stufflebeam (1968),

> Context evaluation would be used when a project is first being planned. The major objective of context evaluation is to define the environment where change is to occur, the environment's unmet needs, problems underlying those needs, and opportunities for change.
> .....
> Information from context evaluation lead ultimately to the establishment of program goals and objectives.

Referring to the key words in that statement, notice a concern for entry into the model ("first being planned"), the establishment of "environment" as a near-synonym for context, and a concern for the future of the model ("where change is to occur"). That brings us to the point at which the basic cybernetic model can now be graphically shown merged with CIPP (Figure 4-4).

Much that is implied by context evaluation has been widely accepted in ID methodology. Throughout the several preliminary steps of the ID process, those activities collectively categorized as "front-end analysis," context evaluation is an operant factor. In particular, those procedures which are sometimes identified as needs assessment draw upon an evaluative process which looks outward at the environment surrounding and encompassing the educational setting.

Up to some point, examination of the en-

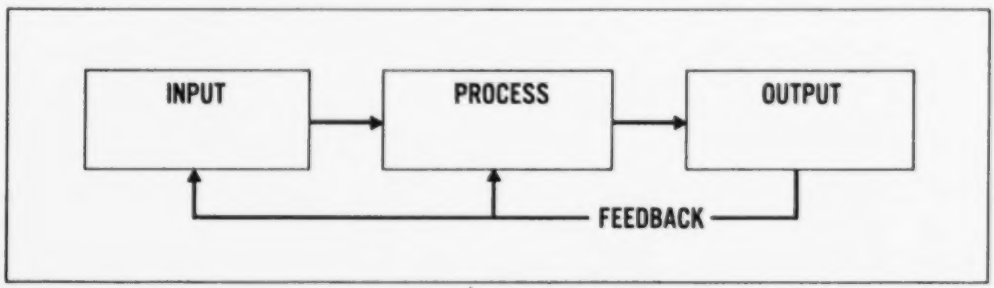


Figure 4-3. A basic cybernetic model.

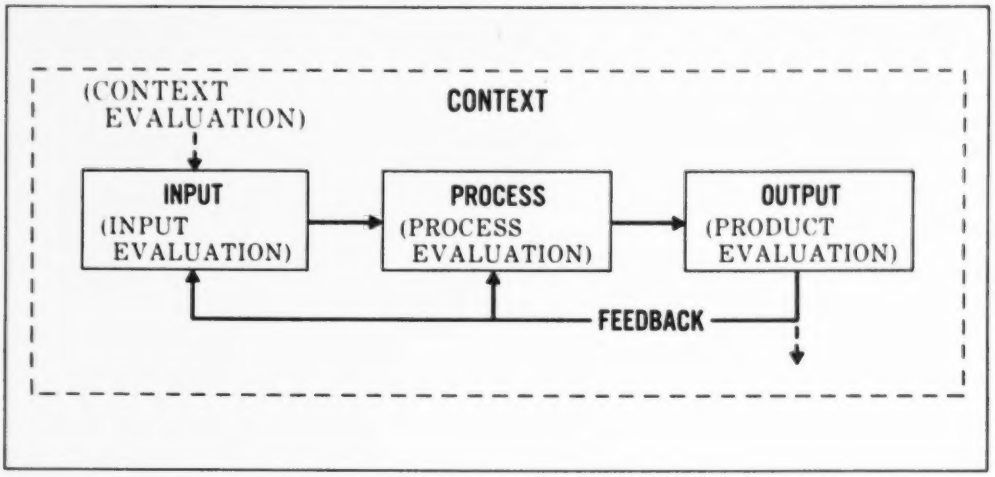


Figure 4-4. CIPP applied to basic cybernetic model.

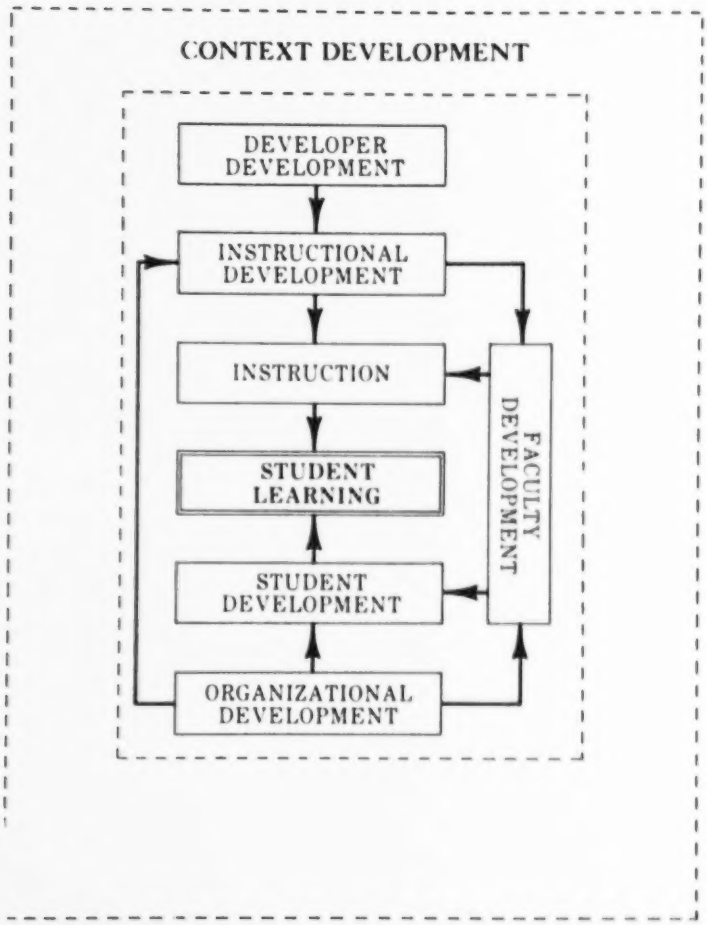


Figure 4-5. The universe of learning model: II.

vironment is an ID procedure. Keep in mind, however, that once that amorphous point is reached, the context beyond is no longer directly integrated into the ID process. The hazy nature of the resultant boundary confounds the attempt to describe precisely the universe in which ID exists. In Figure 4-5 a new term, context development (CD) is introduced. The imprecise boundaries and, to a degree, the sense that an environmental context can have no set boundaries, is reflected in the way that context development is graphically presented. The "encompassing" nature of the portrayal is intentional. The vagueness of the lines as limits is intentional. The ability to interpret the image as either two boxes or as a surrounding ring is fortuitous, but useful, in explaining the appropriateness of CD as a concept to be juxtaposed with all of the other "developments" contained in this model.

First, pursuing the astronomical metaphor offered earlier, a view of the dashed lines as two boxed--one within the other and both surrounding the rest of the model--lends itself to a suggestion of inner space and outer space. The inner space notion sparks the idea that all of the "spaces" between the various components of the model are capable of being developed. Following this line of thought, we could project the possiblity of the separate boxes growing together over time. Such a conjecture about growing together is interesting, but must be seen as distinct from the intended implication of the model: that the effects of the various components should come together in order to promote student learning.

The outer space interpretation lends a aura of all-inclusiveness, far-reaching impact, open-endedness, and the like. If we keep in mind that "context" was initiated into our universe of concern by Stufflebeam and that his 1971 definition of context evaluation said that, "This type of evaluation is systematic and macroanalytic..." (emphasis added), the bigger-picture view gains credence. However, Stufflebeam also included in his definition a repetition of his 1968 thought that context evaluation defines the environment. By this he seems to mean that defining is tantamount to identifying a universe of concern. That is fine for evaluation. Nothing could be more appropriate. Yet, in the Universe of Student Learning Model, "defining" cannot be allowed to have an interpretation that would imply restricting, limiting, or excluding (as in defining that which is "in context" and excluding that which is not).

Consider now the other way that CD can be viewed from its graphic presentation in Figure 4-5 -- as a ring (band, strip, track, donut) surrounding the central components of the system. This view is in many ways the preferred view, but we must approach it with care because it is a view that can be somewhat deceiving. Specifically, the ring interpretation might erroneously lead a reader to believe the central components themselves are not a part of the total context. All of the components of the model are part of the context. The named components, however, are selected parts of the whole environment and may be discussed apart from the greater context--as they have been in this description of the model.

So far this discussion has been limited to establishing the meaning and relevance of context. What about the expanded term, "context development?" A place to begin would be with definitions:

> **Context Development (CD):** (1) The changes in the environment brought about by natural and human forces. (2) Planned programs of action by an individual, group, agency, organization, or profession to influence environmental changes.

Notice that the first definition of CD, like an earlier OD definition, is passive. Some things happen and there is very little mere mortals can do to prevent or change them. Lack of control, however, is no reason for indifference. If it looks like rain, we can carry an umbrella. In a more positive vein, if we think that it is going to rain periodically all summer, we can plant a garden. The point is that we need not be able either to plan or to control change in order to take advantage of its opportunities or to minimize its adverse consequences. Consideration of impending unplanned and uncontrolled events and contingency planning are, therefore, important aspects of all of the "developments" in our model and are particularly relevant to CD.

In Figure 4-6 three contextual change categories are shown in the overall-gray area of CD. An example of the more active brand of CD identified by the second definition, above, would be the government relations program of the Association for Educational Communication and Technology (AECT). As representatives of the profession, AECT personnel could testify--lobby, even--for the passage of a congressional bill to fund an R&D project. The project could succeed, adding to our knowledge and maybe also provide new technology for instruction. An unlimited number of other scenarios are possible, but are not necessary to make the point that it is possible to influence the world "outside"

Three brief, somewhat related examples of ways in which we can use CD by anticipating the developing context will serve to anchor each of the last three boxes in the completed Universe of Learning Model. Some conjecture is present in each example.

Example number one: Random access videodisc technology is virtually upon us. The equipment, with provisions for obtaining software, may soon be both available and affordable. The ID practitioners will either by ready to plug into the potential of this technological breakthrough or they will not. The chances are good that they will be ready if DD functions as it should.

Example number two: Anticipating the po-

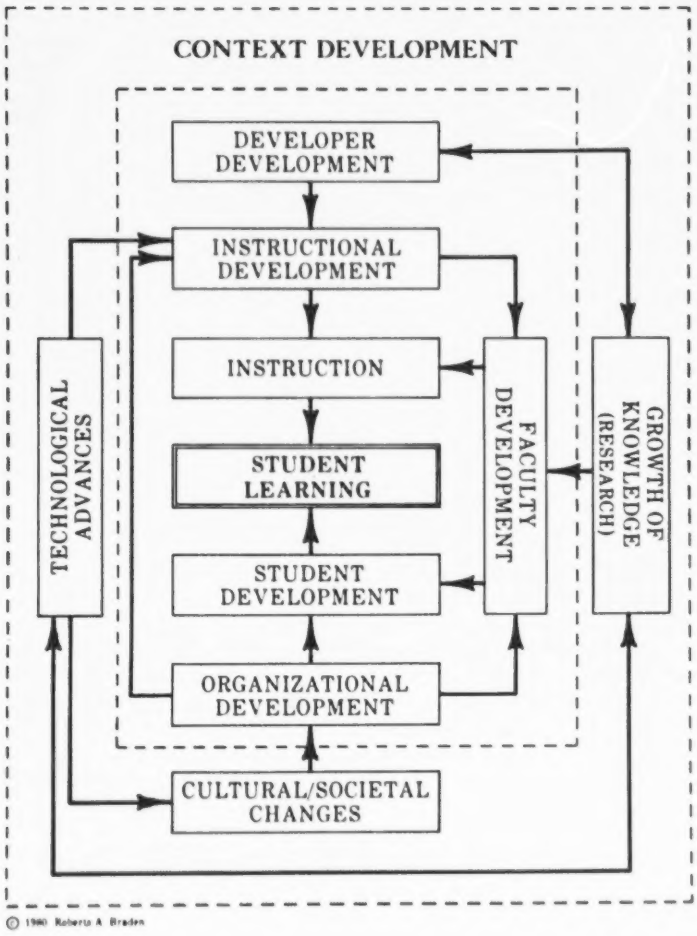


Figure 4-6. Active context development.

tential of video-discs, an advanced doctoral candidate in a DD program could set up an experiment which would test potential applications of video-disc technology as a medium for disseminating new research findings to faculty members in biology (or some other discipline). Results of the research would contribute to DD, perhaps would cause changes in FD, and might also have impact upon the further development of video-disc technology itself (if technical performance data were gathered and shared with the manufacturer).

Example number three: Video-disc technology has the potential for revolutionizing data storage and retrieval. This, in turn, may cause radical changes in our habits, in our value systems, and in our need to go to central repositories of knowledge in order to gain access to information. To meet these new conditions, ID, FD, and SD programs would require major alterations. The OD program is projected in Figure 4-6 as being the change agency which would sponsor and coordinate program alterations throughout the system.

## SUMMARY

The educational sun does not revolve around ID, but it would be hard to dispute that ID is a bright star in the educational heavens. By redirecting our attention to the basic fact that student learning is the only reason for the existence of the entire educational universe, it has been possible to build a model showing the relationships among the major components of the system which supports student learning. There may be agony amongst a few super-advocates of ID because ID ended up two squares away from the center of things. But still, this is ID's universe, and it seems to this author that ID is not diminished by the place into which it fits.

As a parting thought, let me suggest that there are alternative ways of considering the relationships delineated in this chapter. If you are willing to posit that student learning will take care of itself, (a risky assumption, in my opinion) then I offer one final model for your consideration. It

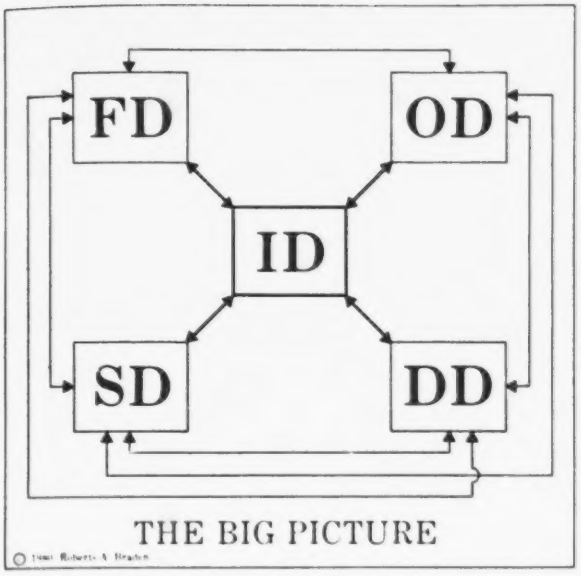


**Figure 4-7. Instructional context development (ICD) model.**

should require no further explanation. I call it the Instructional Context Development Model (Figure 4-7). Any similarity to a previous model is purely intentional.

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